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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/593,665 | 08/02/2007 | Verity Dowdell | NV2-021US | 2808 |
| 93011 7590 03/12/2010 McCarter & English, LLP Novartis Institutes for BioMedical Research, Inc. 265 Franklin Street Boston, MA 02110 | | | | |
| EXAMINER | | | | |
| KIFLE, BRUCK | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1624 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/593,665

Applicant(s)

DOWDELL ET AL.

Examiner

Bruck Kifle

Art Unit

1624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Applicant's amendments and remarks filed 11/23/2009 have been received and reviewed. Claims 1-12 are pending in this application.

Claim Rejections - 35 USC § 112

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

i) Regarding the phrase “benzodiazepine derivative,” which was suggested to be replaced with the term “compound” in the previous office action, Applicants argue that this is an alternative expression. However, the metes and bounds of a derivative cannot be ascertained. One skilled in the art cannot say what derivative is intended. For example, is additional ring fusion permitted? How about a ring opening? The metes and bounds of the compounds beyond what is positively recited by the structural formula and definition of the variables is not known.

ii) Regarding the nature of the “amino protecting group” in R^2 , Applicants point to page 6, lines 5-26. Applicants regard as amino protecting groups such as $-(CH_2)_m-R'$ wherein m is 0-3 and R' is selected from the group consisting of $-O-(C_{1-6} \text{ alkyl})$, p-methoxyphenyl-, $-C(O)O-(C_{1-6} \text{ alkyl})$, $-OC(O)-(C_{1-6} \text{ alkyl})$, aryl, heteroaryl, carbocyclyl and heterocyclyl. This definition is flawed because it includes groups (when $m=0$) groups such as aryl, heterocyclyl, heteroaryl and carbocyclyl which are not amino protecting groups. Inclusion of intended amino protecting groups into the claims is suggested.

iii) The claims are still not clearly written. Applicants have amended claim 1 by inserting the phrase “wherein in the crystallization induced dynamic resolution step, a desired enantiomer is

preferentially crystallized.” Applicants do not say how one enantiomer over the other is crystallized. Appropriate clarification is still required.

v) The process step a) lacks essential method steps. It is still unclear what the steps are in subjecting the compound of formula (IIa) to crystallization induced dynamic resolution into a desired enantiomer.

vi) Claims 11 and 12 are presented as independent claims but include limitation from claim 1. Applicants need to either rewrite these claims as proper dependent claims or insert all of the limitations of the base claim and rewrite these claims as proper independent claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-10 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Rawson et al. (Bioorganic & Medicinal Chemistry Letters (1995), 5(13), 1335-8). The reference teaches a similar process of resolving racemic compounds embraced by the instant claims. The basis of this rejection is the same as given in the previous office action and is incorporated herein fully by reference. Applicants argue that the instant claims differ by requiring a deprotection step. However, protecting and deprotecting an amine is well within the skill of a chemist and routine. Protecting and deprotecting an amine is very common. The claims apply a known technique to a known process. It would have been obvious to one of ordinary skill in the art at the time the invention was made to deprotect the nitrogen with a reasonable expectation of success. Applicants are advised of the KSR decision which states that it is not innovation to optimize and such optimization is common sense.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruck Kifle whose telephone number is 571-272-0668. The examiner can normally be reached on Mondays-Fridays from 8:30 AM -6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bruck Kifle/
Primary Examiner
Art Unit 1624

BK
March 9, 2010